

Urban Neighborhoods

Within urban settings, there exist neighborhoods that are well integrated with key transit providers and direct connections to an urban downtown. As such, these areas that are served by rail transit or provide good bus connections to nearby rail transit are identified as urban neighborhoods. An urban neighborhood is served by vehicles, transit, and pedestrian systems. The neighborhood's built environment is defined by a mix of land use types whose collective synergy promotes one another to create a livable environment. Examples of urban neighborhoods include: South Beach (San Francisco), North Berkeley (Berkeley), Lakeshore (Oakland) with connections to nearby urban downtowns, San Francisco and Oakland, respectively. Potential policies that can be applied to urban downtown are listed below. Refer to the Best Practices section of this report for more information on each policy or program:

1. *Transit/TOD Supportive Policies*

These policies and programs are designed to support the use of transit and to create a walkable transit friendly environment, reducing or eliminating the need for a private automobile. Relevant examples include:

- Carsharing
- Transit Friendly Parking Design
- Transit Incentive Programs

2. *Parking Requirements*

Managing the amount of parking associated with new development is an effective way to allow increased density and to support transit. These policies focus on reducing or limiting the amount of parking that is required and encourage efficient use of the parking. Examples of this approach which are relevant to downtowns include:

- Reduced Parking Requirements
- TOD Friendly Parking Requirements
- Parking Maximums
- Shared Parking

3. Parking Pricing

Pricing has long been recognized as the most powerful parking management tool. Effective pricing policies can be used to discourage commuter parking and increase customer access to convenient short term parking supplies. Revenues from parking can be used to fund transit supportive parking and transportation improvements. A broad range of pricing policies are available for application in urban downtowns:

- On-street Parking Pricing
- Variable Rate Parking Pricing
- Coordinated Off-street and On-street Pricing
- Unbundled Parking
- Parking Cash-Out

4. Parking Management Strategies

Information is a key element of parking management. Effective management of the parking supply and pricing requires access to accurate data defining existing and historic parking characteristics. Research has also shown that consumers respond well to new parking technology which provide them with information about parking and make paying for parking more convenient. The types of strategies include:

- Parking Payment Technology
- Parking Database
- Real-time Parking Information

5. Parking Districts

A parking district is a tool which supports the development of parking and transportation improvements within a given area. Recently it has been shown that property owners, businesses, and downtown are very supportive of programs designed to return revenues from parking back to the district in which they were collected as a means of making desired improvements to the area. Two basic types of districts exist:

- Assessment Districts
- Revenue Districts

6. *Parking Financing*

There are many tools and methods available to finance the development of parking and parking related transportation improvements. These include:

- In-Lieu Fees
- Risk Fund
- Parking Occupancy Tax
- Parking Tax by Space
- Tax Exemptions and Variable Rate Tax
- Grants

Suburban/Small Urban Downtowns

Suburban and small urban downtown areas are generally located in the center of communities with less density as compared to urban downtowns. Typically, these areas contain a good mix of medium or low-rise office buildings and housing types including townhomes and apartments. These downtown locations can act as both origin and destination settings. The parking environment is typically defined by ample surface parking lots, however suburban downtowns also tend to have a good mix of transit service with direct connections to urban settings, (e.g. San Francisco, Oakland, and San Jose). Examples of suburban and small urban downtowns include Walnut Creek, Concord, San Mateo or Palo Alto. Potential policies that can be applied to suburban and small urban downtowns are listed below. Refer to the Best Practices section of this report for more information on each policy or program:

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These policies and programs are designed to support the use of transit and to create a walkable transit friendly environment, reducing or eliminating the need for a private automobile. Relevant examples include:

- Transit Friendly Parking Design
- Transit Incentive Programs
- Walkability and Wayfinding

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Suburban Transit Stations

Suburban transit stations are located in communities with existing centers of high transit activity, defined by rail service or multiple bus lines that connect at one location. As one of the primary lifelines of the city or jurisdiction, suburban transit stations are supported by a large ridership base that includes both local residents and regional travelers. As such, suburban transit stations are directly connected to regional transit providers, specifically BART, in the Bay Area. Examples of suburban transit station areas include El Cerrito del Norte BART, Dublin/Pleasanton BART, or Mountain View Caltrain. Potential policies that can be applied to suburban transit station areas are listed below. Refer to the Best Practices section of this report for more information on each policy or program:

1. *Transit/TOD Supportive Policies*

These policies and programs are designed to support the use of transit and to create a walkable transit friendly environment, reducing or eliminating the need for a private automobile. Relevant examples include:

- Carsharing
- Transit Friendly Parking Design
- Transit Overlay Zones
- Transit Incentive Programs
- Walkability and Wayfinding

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Rural/Small Towns

There are a number of examples of rural and small town areas with the Metropolitan Transportation Commission's jurisdiction. These communities are typically characterized by low levels of suburban development and small established centers of retail activity. These rural and small towns are linked to the urban environment via an established transportation network. It should be noted however that the existing transportation network may or may not include transit linkages to regional public transportation systems. Examples of suburban and small urban downtowns include Danville, Livermore, Morgan Hill, or Vacaville. Potential policies that can be applied to rural and small towns are listed below. Refer to the Best Practices section of this report for more information on each policy or program:

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These policies and programs are designed to support the use of transit and to create a walkable transit friendly environment, reducing or eliminating the need for a private automobile. Relevant examples include:

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◦ BEST PRACTICES

During the recent Transit Oriented Development (TOD) Policy Project conducted by MTC, the participating cities and agencies indicated that the lack of appropriate parking policy and practices was a key obstacle to their efforts to implement TOD around the transit nodes in their communities. A review of the current practices of Bay Area jurisdictions revealed that many cities already have in place parking policies that are supportive of TOD. However, it was found that these cities also find it hard to overcome deep seated resistance to reduced parking requirements, increased parking fees, and the other key elements of TOD supportive parking policies. In general the cities need access to more information and examples of how other communities have implemented these policies and have seen successful results. This discussion of the best practices of other cities focuses on the six key areas that have been identified as potential TOD supportive parking policies and programs:

1. Transit/TOD Supportive Policies
2. Parking Requirements
3. Parking Pricing
4. Parking Management Strategies
5. Parking Districts
6. Parking Financing

These topics are discussed in more detail in this section of the report. For those who would even more information, please refer to the Task 3 Report – *Best Practices* which is in the companion document to this report, the *Compendium of Technical Papers*.

Existing Bay Area Parking Policies

A survey of Bay Cities conducted by MTC was used to document current approaches to parking policies and practices. The survey and review of the parking requirements and policies currently used by Bay Area cities revealed the following:

1. Much of the classic literature on parking is oriented towards free, auto- dependent suburban land uses.
2. Cities seeking to develop new parking policies and programs have a number of technical resources available to them. However, many of the resources offer limited and confusing information for cities seeking to modify their parking requirements or to develop other parking management policies. A list of these documents is provided on the next page.
3. Cities tend to copy the parking requirements adopted by their neighbors and other peer cities rather than invest the major effort required to develop requirements that are truly relevant to the city's characteristics and goals.
4. Most cities have a one-size fits all uniform parking requirement which covers the entire city. Parking requirements in these cities do not change with density and transit availability, which inhibits TOD in those areas which have good levels of transit access.
5. Many Bay Area cities *have* adopted policies and programs specifically designed to promote smart growth and TOD already, but have not been able to implement these policies.
6. Traditional concepts of land use and parking are hard to displace. Any successful effort to adopt progressive parking policies must address the numerous concerns of the various stakeholder groups and the political decision makers.
7. Because many cities have already taken the steps to adopt progressive parking management policies and measures, the other cities can benefit directly from their experience. The perceived risks of being a pioneering community can be diminished through sharing of experiences and information, which is one of the key objectives of this project.

Those desiring more information about current policies and practices should go to the Task 2 Report - *Existing Bay Area Parking Policies* in the companion document to this report, the *Compendium of Technical Papers*.

Resource Documents

The following documents and resources are available to assist communities in the development of new parking policies and programs:

Institute of Transportation Engineers' (ITE) *Parking Generation*

While this document is the best source of parking demand data by land use type, cities hoping to develop parking policies supportive of smart growth and TOD will generally not find this resource very helpful. The information tends to be for suburban land uses and generally is not applicable to urban and semi-urban settings.

National Parking Association/Urban Land Institute's *Dimensions of Parking*

While this document is a good general resource for information about most aspects of parking, there is not much information in this publication to assist cities interested in smart growth or TOD oriented parking policies. Some of the topics which are described in *Dimensions of Parking* are a review of the analysis tools which help assess parking needs; the potential costs of providing new parking; the development of local land use and zoning requirements; and the elements of functional parking design.

American Planning Association's *Flexible Parking Requirements*

Given the variability of parking within different communities, the American Planning Association (APA) has developed recommendations to assist cities and jurisdictions create flexible parking regulations. This document is an excellent resource for cities to use to establish parking requirements which reflect actual local characteristics and which provide the degree of flexibility required to encourage innovation in development practices.

Weant and Levinson and the Eno Foundation's *Parking*

In the publication entitled *Parking*, Weant and Levinson in collaboration with the ENO Foundation take a comprehensive view of parking, covering a broad range of topics. *Parking* reviews a variety of topics from assessing different types of parking demands to citing examples of parking experiences throughout the nation.

Urban Land Institute's *Shared Parking*

The Urban Land Institute (ULI) report *Shared Parking*, presents the findings of shared parking research over the past 22 years. In its first publication in 1983, *Shared Parking* established a methodology for shared parking analysis. *Shared Parking* is an excellent resource for cities to develop parking requirements for specific projects, land uses, and combination of land uses. The methodology is, however, fairly labor intensive. The base parking demand ratios that are provided are largely for suburban land use types, and as a result care must be taken when applying these ratios to and urban or semi-urban settings.

Donald Shoup's *The High Cost of Free Parking*

No publication on the subject of parking has stimulated as much discussion and interest as *The High Cost of Free Parking* by Donald Shoup. Shoup, a professor of planning at the University of California, Los Angeles, has spent most of his career researching parking and land use relationships. *The High Cost of Free Parking* is a good introduction to many of the basic principles and concepts surrounding the development and implementation of parking policy. It is well written and comprehensive. The conclusions or recommendations could be used by cities to modify their parking programs and policies in ways which would support smart growth and TOD. It does advocate these particular approaches, and does not fully explore other types of programs or policies which might lead to similar results.

Victoria Transport Policy Institute's *Parking Solutions, A Comprehensive Menu of Solutions to Parking Problems*

The Victoria Transport Policy Institute under the leadership of Todd Littman, its founder and director, has developed a website entitled *Parking Solutions A Comprehensive Menu of Solutions to Parking Problems* < <http://www.vtpi.org/tdm/tdm72.htm> >. The website is unique in that it provides an accessible on-line source of information regarding solutions to common parking problems. This website is a good resource for information of parking policies and programs which are supportive of TOD and Smart Growth.

1. Transit/TOD Supportive Policies

A key component of a parking management program is to combine parking strategies with an increase in transit service options or in an area with lots of transit options. Transit improvements and incentives help reduce parking demand and create viable alternative modes in areas trying to implement parking management and pricing programs. Downtowns and town centers with high quality transit benefit greatly by using transit as a resource in-lieu of parking spaces. This can result in a reduction in parking demand that combined with transit use and pedestrian improvements, creates a more vibrant, walkable area.

Carsharing

Carsharing programs provide participants with access to a fleet of centrally owned and maintained vehicles located near residences, workplaces, or transit hubs. Members typically reserve shared vehicles for a specific timeframe and pay for use through some combination of hourly, overhead, and mileage-based rates.

Implementation of carsharing offers compelling parking management benefits. First, by distributing the fixed costs of car ownership into the marginal cost of every trip made, carsharing reduces the total number of trips made by participants. Secondly, by offering an alternative to individual car ownership, carsharing programs have helped participants eliminate one or more existing household vehicles. By increasing the number of users per vehicle and encouraging more frequent use throughout the day, carsharing programs directly reduce parking demand while preserving the convenience and flexibility of automobile use for participants.

Transit Friendly Parking Design

In many communities, parking facilities are designed strictly for the convenience of the automobile user with no consideration for transit. In suburban communities, up to 75 percent of the site can be dedicated to surface parking (Tri-Met, 1996). It is important to consider street orientation, pedestrian entrances and links to transit service (Calgary Transit, 2006). This includes reducing the visibility of parking structures and parking lots (reducing “dead space”), creating an area with destinations that encourage walkability. Often times, these areas can create more transit and pedestrian friendly parking by either disguising parking to look like adjacent buildings or by adding retail outlets and display cases at ground level of the parking structures.

Transit/TOD Supportive Policies – Examples

Carsharing

Example: San Francisco Parking Requirement Reduction

The San Francisco Planning Department granted a variance to construct the 141-unit Symphony Towers apartments with only 51 spaces (rather than the required 141) in part because of the commitment for two car sharing parking spaces and the use of unbundled parking (Shoup, 2005).

Example: City of Berkeley Fleet Replacement

The City of Berkeley, California retired its fleet vehicles and replaced them with carsharing vehicles saving an estimated \$250,000 in the first three years of the program (KRON4, 2004; City of Berkeley, 2005).

Transit Friendly Parking Design

Example: Los Angeles County Metropolitan Transportation Authority Transit Friendly Parking Design

In Los Angeles, the Los Angeles County Metropolitan Transportation Authority developed transit friendly parking design credits as part of its congestion management program. It also included development credits for projects willing to implement parking pricing (Kodama, Willson, Walker Parking Consultants et al, 1997).

1. Transit/TOD Supportive Policies

Transit Overlay Zones

Transit can also be supported by the use of transit overlay zones and transit friendly parking design. In a transit overlay zone, cities modify the underlying zoning regulations to ensure that development encourages greater transit use and support efficient transit service. For example, the Transit Overlay Zone in the City of Mountain View allows for the creation of corporate neighborhoods that are integrated with a new light rail station.

TOD and Transit Overlay Zones allow more density while reducing parking requirements. It is directly linked to transit incentives (employer sponsored bus passes) and/or through the zoning and permitting process that require new developments, at a minimum, to meet the exiting peak hour transit mode split through the use of TDM actions, allowing shared parking use and granting density bonuses for certain uses or development design.

Transit Incentive Programs

Transit Incentive programs vary from passive and indirect to planned under an overall strategy mandated through local ordinance, law or promulgated rulemaking. Although broadly considered as part of Transportation Demand Management actions, incentive programs are generally implemented at the local level by transit providers (bus passes, fare free zones, fare discounts to seniors, school kids etc), individual employers or through TMAs, and through special user side subsidies from social service agencies or school districts. The most common incentive is a pass program. In areas with a parking shortage, group discount pass programs may reduce parking demand, shifting commuters from drive alone to transit.

Walkability and Wayfinding

A key consideration in the development of smart growth and TOD parking strategies is the development of a walkable environment. Often times, motorists will experience a parking shortage in the immediate vicinity of their final destination while ignoring the availability of parking spaces within a short walking distance. Encouraging the creation of comfortable walking areas and linkages between parking facilities and destinations improves customer perception and brings more parking spaces into the total parking supply.

Transit/TOD Supportive Policies – Examples

Transit Overlay Zones

City of Oakland – Chapter 17.100 S-15 Transit Oriented Development Zone Regulations

The S-15 zone is intended to “create areas devoted primarily to serving multiple nodes of transportation and to feature high density residential, commercial and mixed-use development to encourage a balance of pedestrian-oriented activities, transit opportunities and concentrated development.” The S-15 zoning regulations are used to create high-density transit oriented development.

The S-15 zones require parking as provided in Chapter 17.116. The actual number of required parking spaces is generally determined by the Director of City Planning.

Transit Incentive Programs

Example: Santa Clara Valley Transportation Authority Annual Pass Program

The Santa Clara Valley Transportation Authority offers ECO passes for businesses and residential communities. Employers can purchase an annual ECO pass for all full-time employees at a discounted price based upon service and number of employees. Residential communities such as condominiums, apartments, townhouses, homeowner associations and community associations can also purchase ECO passes for their residents at a discounted price. Customers can use these passes on any SCVTA bus or rail line. The use of these passes saves the user on the cost of a transit pass, increases transit ridership and results in a lower demand for parking.

Walkability and Wayfinding

Examples:

- Philadelphia PA, San Antonio TX, and Indianapolis IN have developed pedestrian Wayfinding systems that make it easier for visitors to walk from parking structures to major attractions.

- The City of Burbank (1992) used a combination of priority parking for customers, shared parking, employee parking pricing, and pedestrian improvements to revitalize its downtown area, creating an entertainment area with 35 restaurants, a downtown shopping center, movie theaters, anchor retailers and specialty retail shops. Pedestrian improvements create a core walkable environment and provide linkages to shared parking facilities (Wilbur Smith, Kodama et al, 2005).

2. Parking Requirements

Off-street parking requirements are standards established by cities that require construction of parking for each use. Parking requirements can vary according to use, location and characteristics of each community. They are designed to prevent spillover onto public streets and adjacent properties. Off-street parking requirements in local municipal codes directly affect parking supply, parking pricing possibilities, urban design, and development feasibility. Therefore, it can be acceptable to reduce or eliminate parking requirements in areas with development opportunities that may provide a better use of resources, in locations with shared parking opportunities to handle peak parking demand and in communities with a highly developed transit system that provides viable alternatives that reduce parking demand.

Reducing Parking Requirements

In deciding how much to reduce the requirements or whether to eliminate them entirely, communities should consider the effect of providing parking on development feasibility. This is especially important in locations with high land costs or community preservation issues (protection of historical buildings, community character, aesthetics and environmental concerns). The reduction or elimination of off-street parking requirements is most effective in areas with high-quality transit service, parking pricing and a walkable environment. This reduces the demand for parking and impact of spillover parking into a neighborhood.

To reduce, develop demand based, or eliminate parking requirements, a community will need to examine economic issues, site and neighborhood characteristics, location features, and market issues. In addition, the community will also need to examine existing parking occupancy to determine the feasibility of reducing parking requirements in the downtown. One key component to effectively implementing reduced parking requirements is to consider these policies within the context of Transportation Oriented Development. As such, each community must identify its individual process and select the most appropriate tools and standards. Notably, if reduced parking requirements are approached in this way they can be linked to development's proximity to transit and good pedestrian infrastructure.

Developing TOD Friendly Parking Requirements

As previously stated, the initial step toward developing revised parking requirements involves conducting a parking utilization study to determine how the existing parking supply is being effectively used by parking patrons.

Parking Maximums

Alternative methods of tailoring parking requirements involve establishing limits or “caps” on the quantity of parking that can be provided for a given development. Establishing the parking maximum limits the number of spaces, promotes more efficient use of land, enhances urban form, encourages the use of alternative modes, provides for better pedestrian movement and protects air and water quality. Parking maximums can be linked with the availability of alternative modes to capture the accessibility of the existing transit infrastructure.

Shared Parking

Shared parking can significantly improve the economics of constructing new parking by providing greater turnover in the facility – rather than one user per day a facility may service multiple users. Shared parking is based upon the concept of using the same parking spaces for two or more different land uses at different times. Notably, if payment charges are placed on parking, this turnover can increase the ability to finance the facility. Allowing for shared parking arrangements significantly reduces the amount of land devoted to parking and, in so doing, creates more opportunities for mixed use, creative site planning and landscaping. In addition to revisions to local zoning codes to enable shared parking, shared parking arrangements can be implemented through shared parking agreements between individual developers or the construction of public parking facilities. In some cases, shared parking can be a formal or informal agreement among different peak users on different days.

Some local jurisdictions incorporate language in local ordinances to permit and even encourage shared parking. These jurisdictions allow shared parking to meet minimum parking requirements for uses located within the same lot or building and also permit off-site shared parking arrangements to meet on-site parking requirements for complementary uses within a defined area. These location requirements are typically based on acceptable walking distances.

Parking Requirements – Examples

Reducing Parking Requirements

Example: Berkeley TOD Parking Requirement Reduction

Section 23E.28.140 Required Findings for Parking Reductions under Section 23E.28.130

- A. In order to approve any Administrative Use Permit or Use Permit under this chapter, the Zoning Officer or Board must make the findings required by Section 23B.28.050 and/or 23B.32.040 as applicable, in addition to any findings required in this section to the extent applicable.
- B. To approve any reduction of the off-street parking spaces under Section 23E.28.130, or under other sections that refer to this section, the Zoning Officer or Zoning Adjustments Board must find that the reduction will not substantially reduce the availability of on-street parking in the vicinity of the use. The Zoning Officer or Board must find that at least one of each of the two groups of conditions below apply:
 - The use is located one-third of a mile or less from a Bay Area Rapid Transit (BART) station, intercity rail station or rapid bus transit stops; or
 - The use is located one-quarter of a mile or less from a publicly accessible parking facility, the use of which is not limited to a specific business or activity during the new use's peak parking demand; or
 - A parking survey conducted under procedures set forth by the Planning Department finds that within 500 feet or less of the use, on the non-residential street where the use is located, at least two times the number of spaces requested for reduction are available through on-street parking spaces for at least two of the four hours of the new use's peak parking demand; or
 - The use includes one of the following neighborhood-serving uses: Retail Products Store(s), Food Service Establishments, and/or Personal/Household Service(s). These uses include, but are not limited to: Dry Cleaning and Laundry Agents, Drug Stores, Food Products Stores, Household Items Repair Shops, and/or Laundromats; and
 - The parking requirement modification will meet the purposes of the district related to improvement and support for alternative transportation, pedestrian improvements and activity, or similar policies; or

There are other factors, such as alternative transportation demand management strategies or policies in place, which will reduce the parking demand generated by the use.

- C. To approve any modification of the parking requirements, unrelated to the number of spaces, under Section 23E.28.130, the Zoning Officer or Zoning Adjustments Board must find that the parking requirement modification allows the continued use of an existing parking supply and that meeting the parking requirements is not financially feasible or practical. (Ord. 6856-NS § 7 (part), 2005)

Parking Maximums

Portland, Oregon Maximum Parking Requirements

The City of Portland, Oregon has established maximum parking requirements for new development in each central business district. Additionally, the City has also applied a parking maximum for development across the entire Portland metro area. Parking maximums are set based upon the availability of transit service. Lower maximums are set based upon a ¼ mile walk from a frequently served bus stop or ½ mile walk from a transit station. The parking maximum in the central downtown core is 0.7 per 1,000 square feet up to 2.5 in adjacent business districts.

Shared Parking

Example: City of Berkeley Shared Parking Code

Section 23D.12.060 Joint Use of Off-street Parking Spaces

- A. The Zoning Officer may approve an AUP to allow a Joint Use Parking Agreement to satisfy off-street parking space requirements, if all of the following findings are made:
1. The off-street parking spaces designated for joint use are located within 800 feet of the use to be served; and
 2. The times demanded for these parking spaces will not conflict substantially between the use offering the spaces and the use to be served; and
 3. The off-street parking spaces designated for joint use are not otherwise committed to satisfying the parking requirements for some other use at similar times.

- B. The Board may approve a Use Permit authorizing the off-street parking requirements for offices in R-4 or R-5 Districts to be supplied jointly with off-street parking facilities provided for multiple dwellings, if it finds:
1. No more than 20 percent of the off-street parking spaces required for the multiple dwelling use will serve as required off-street parking for offices; and
 2. The off-street parking spaces to be jointly used are located on the same lot as the offices which they are to serve, or on property under the same ownership within 300 feet from such offices.
- C. A statement shall be recorded in the Office of the County Recorder that restricts the use of the property and designates the off-street parking that is to serve the other property. The deed restrictions shall state that the property cannot be used so as to prevent the use of the parking that is being provided in compliance with the requirements of the City, unless the restriction is removed by the City. Upon submission of satisfactory evidence either that other parking space meeting the requirements of this Ordinance has been provided or that the building or use has been removed or altered in use so as to not longer require the parking space, the City shall remove the restriction from the property. (Ord. 6794-NS § 1 (part), 2004; Ord. 6478-NS § 4 (part), 1999)

3. Parking Pricing

Parking pricing concepts should be considered as an integral part of any comprehensive parking policy approach. Parking pricing is a powerful tool that can affect parking occupancy and turnover and can induce greater turnover of the most convenient spaces, increase parking availability, and generate revenue to fund community improvements. Parking pricing is most effective when it is combined with a comprehensive package of incentives for alternative modes, such as rail improvements, express or bus rapid transit, shuttle services, bus service, pedestrian improvements.

On-Street Parking Pricing

On-street parking pricing is an integral part of parking pricing, since on-street parking conditions often drive off-street policy. Notably, if the on-street price is too low, demand for these spaces will exceed supply, resulting in a shortage of parking spaces. Therefore, the development of a successful on-street parking management system relies upon the development of a coordinated and comprehensive parking management system that prioritizes parking spaces for specific users.

Variable Rate Parking Pricing

Variable rate parking pricing can be used to maximize parking resources, encourage the use of alternative modes and discourage single occupant vehicles. Variable rate parking pricing can be used in areas with seasonal or special event parking considerations. This may also be used by cities to maintain desired occupancy rates (for example – charge a higher fee during events near special event centers or during special shopping seasons). It can also be used to encourage turnover and increase short term parking supply.

Coordinated Off-Street and On-Street Pricing

Off-street and on-street parking prices may also be tied together. At the same time, off-street short term parking rates are coordinated with on-street hourly rates. This encourages commuters to use alternative modes while still providing short term parking for customers.

Unbundled Parking

Typically, parking is *bundled* or absorbed into tenant leases, hiding the true cost of parking. For example, the price for apartment with two parking spaces may be rented for \$1,000 per month. However, if the price for those parking spaces were unbundled, the price for rent for the apartment would be \$800 per month, plus \$100 per month for each parking space. Alternatively, renters could be offered a discount if they use fewer than the average parking spaces provided. Such that an apartment or office might rent for \$1,000 per month but renters using only one space receive a \$100 monthly discount. Unbundling parking is an essential first step towards getting people

to understand the economic cost of parking and providing users with the opportunity to opt out of parking and make alternative travel decisions. Without unbundled parking, tenants often assume that parking is free. Unbundled parking provides a foundation upon which additional parking pricing policies can be understood and built upon.

Parking Cash-Out

Parking cash-out allows employees to choose between a parking subsidy or the out-of-pocket equivalent cost of the parking space. Employees may choose to apply the money towards their parking space or make arrangements to use a lower cost alternative mode and keep the cash. A study on parking cash-out summarized results from seven work sites and estimated a 26 percent reduction in parking demand (Shoup, 1992). Under California Law, Assembly Bill 2109 (1992) requires parking cash-out of sites with 50 or more employees in non-attainment air quality areas who provide parking subsidies, have non-owned employee parking and can reduce parking without a financial penalty. In recent years, the definition of cash-out has been expanded to provide a more flexible and broader application. Within the past ten years, many employers in Downtown Portland, Downtown San Francisco and Downtown Seattle have created effective programs that eliminate free or subsidized parking while providing employees with transit passes.

Parking Pricing – Examples

On-Street Parking Pricing

Example: Redwood City On-Street Parking

Redwood City has taken the concept a step further, approving enabling ordinance that uses parking utilization as the key for on-street pricing policy. The municipal code (section 20.120) allows for the periodic adjustment of the downtown meter rates based upon a target parking utilization rate of 85 percent. It also includes the creation of a parking database and provision of an annual parking utilization study to adjust parking rates. The parking manager has the authority to adjust rates up or down twenty five cents based upon the target occupancy rate of 85 percent. The hourly meter rate shall not exceed \$1.50.

Variable Rate Parking Pricing

Example: New York

New York's Mid-Town Commercial Parking Pricing Program sets on-street rates for multi-space muni-meters (pay and display) at \$2 for one hour, \$5 for two hours, \$9 for three hours and \$12 for four hours. Initial results from the program indicated a decrease in average parking time from 4 to 6 hours to 90 minutes and a reduction in occupancy rates from 120 percent to 85 percent (New York, 2006). New York pay station customers can also use credit cards or NYC Parking Cards to pay for parking. Estimated revenue from this program increased from \$3.527 million (FY2004) to \$6.42 million (FY2006).

Coordinated Off-Street and On-Street Pricing

Example: Aspen Colorado

Aspen, Colorado (1999) balances on-street and off-street parking pricing policies. Aspen changed its parking pricing structure to increase the availability of prime on-street parking (short-term customers) and increase the utilization of its off-street municipal parking structures (long-term visitors and employees). Funding from parking is used to pay for parking improvements, improve streetscape and encourage the use of alternative modes (Aspen 1999).

Unbundled Parking

Example: San Francisco: Central Waterfront Plan

The Central Waterfront Plan includes the elimination of dwelling unit density restrictions, designates residential as a principally permitted use, limits retail and office uses to the first and second stories, eliminates minimum parking requirements and requires unbundled parking from the rental or sale of residential uses.

Parking Cash-Out

Example: City of Santa Monica Parking Cash-Out Law

The City of Santa Monica is the only city in California that requires compliance with the parking cash-out law. The program is part of the city's Emission Reduction Plan. There are 26 employers who participate in the program, resulting in a 20 percent reduction in parking use at these employment sites. A study conducted by Donald Shoup (1997), concluded that two Santa Monica employers who used cash-out reduced solo driving by 7 to 8 percent.

4. Parking Management Strategies

Parking management is defined as the strategic application and use for existing and planned parking spaces both on-street and at-off street facilities in a given area. Parking management is a system management tool which addresses how vehicles access, use (length of time) and egress from parking spaces. The development of parking management strategies, programs and technology considers parking perceptions and attitudes, parking pricing, land use policies, community characteristics and transportation alternatives. Developing parking policies to support TODs and Smart Growth, however, requires a new attitude that recognizes parking location, cost, supply and demand issues. Implementation of parking management strategies needs to consider economic and financial feasibility issues, site characteristics, location features and compatibility with surrounding uses as well as market and regional issues.

Parking Payment Technology

Rapid development in pay station technology is providing options for variable pricing, accept multiple payment mediums, more user friendly, support ITS information on parking availability to users and provide better intelligence for parking system managers. This new technology allows for the development of pay stations with advance pricing capabilities. The pay stations create financial and operational database that tracks, an audit trail, real-time data and increase revenue opportunities. Pay stations allow accept credit cards and create the ability to use on-street variable rate parking systems that allow for higher charges for longer stays or special events.

Parking Database

ITS technology provides great opportunities to develop comprehensive on-street and off-street parking databases that will give local jurisdictions more accurate assessments of parking use upon which they can develop programs to best address local conditions and issues. These data bases could also be used to provide the public with real-time information on parking availability at employment sites and other attractor/generators. Current efforts involve taking and evaluating regular surveys. Cities are now beginning to examine the feasibility of creating these types of database through ITS technology to gather analyze and provide real-time parking information.

Real-Time Parking Information

Real-time parking information, guidance and wayfinding systems make it more convenient to find parking. These systems range from guidance given in the garage itself as to the location of available spaces to coordinate guidance systems that provide directions to the appropriate parking garage and guidance within that facility. Often districts have sufficient total supply of parking, but use portions of the inventory inefficiently. Some cities have electronic wayfinding guidance systems as they enter a district. Both improve traffic circulation and the efficiency of the parking system.

Parking Management Strategies, Programs, and Technology – Examples

Parking Payment Technology

Example: City of Seattle

In 2004, the City of Seattle began replacement of single space meters with a multi-space pay and display system. As a result, per space parking revenue with the same fee has increased 40% due to the propensity of motorists to use credit cards (62% of parking revenue) to purchase the maximum parking period allowed and avoid a parking ticket.

Parking Database

Example: Downtown Seattle Parking Database

Downtown Seattle has a parking database. Downtown Seattle has limited parking (54,063 spaces) to support an employment base of 181,807 jobs. The overall central business district peak-hour occupancy rate of 76.8 percent indicates that parking is generally well used in Downtown Seattle (King County Metro, 2001). In Downtown Seattle, monthly rates vary from \$38 to \$275 (PSRC, 1999), with an average monthly rate of about \$174 (King County Metro, 2001). Daily parking rates vary from \$21.50 per day to as low as \$3.00 per day, with an average at \$14.39 per day.

Real-Time Parking Information

Example: Santa Monica

Downtown Santa Monica has introduced a web-based system that allows visitors to easily determine when and where parking is available. The system is based on data transmitted by sensors located on ramps at every entry/exist point throughout participating structures that collect travel information and track the movement and direction of vehicles in the facility. Parking information is updated every 5 seconds to ensure real-time data is transmitted.

5. Parking Benefit Districts

Parking Benefit Districts generally utilize revenues generated by a range of means including assessments, taxes or parking meters to provide transportation-related services, and various infrastructure/and or other improvements in order to improve the viability of the area. These districts may also use a variety of strategies to enhance the benefits derived from the revenue. Parking can be managed on an area-wide or site specific basis. Development of a parking benefit district begins with the involvement of key stakeholders(e.g. businesses, developers, land owners, residents and government representatives) to create a set of guiding principles that help facilitate the process and develop the rules for a parking district. During this initial step, identified stakeholders should work collaboratively to of shared goals, objectives and an overall plan to create a parking district. The next step is to develop an action plan that establishes boundaries, specific location of parking meters, assessments and other strategies. During the second step, questions of how, where, how much, and for which items funds shall be spent on should be addressed.

Example: Old Pasadena Business Improvement District

In Old Pasadena, there are an estimated 750 on-street parking spaces and 8,000 off-street spaces. The City operates three parking structures in Old Pasadena with approximately 1,600 spaces. In these facilities, the first 90 minutes are free, with the hourly rate set at \$2 and a maximum rate of \$6. Vehicles that enter from 10:00 pm to 5:00 am pay a flat rate of \$5 (Meyer Mohaddes, 2006).

The focus of the Old Pasadena parking system is to make the on-street parking more accessible and available for customers rather than visitors and employees. The City created a parking management program for on-street parking utilizing meters that were calibrated to eliminate “cruising” for spaces. According to the Kolozsvari and Shoup (2003) study in Old Pasadena, the city did the following:

- Gained support of merchants for installing the meters by agreeing that the revenue stays in the Old Pasadena District.
- Coordinated efforts with the Old Pasadena’s Business Improvement District (BID) to create boundaries for the Old Pasadena Parking Meter Zone (PMZ).
- The City founded the Old Pasadena PMZ Advisory Board which was made up of businesses and property owners. The members provided input for parking policies and spending priorities for area’s meter revenues.
- Installed parking meters to manage on-street parking supply and established a \$1.00 hourly rate. Increased available parking spaces by pricing the on-street spaces.
- Allocated all of the funds to public investment in the Old Pasadena District.

- Utilized funds to purchase street furniture, trees, tree grates, and historic lighting fixtures and to maintain the area. Maintenance included daily sweeping of the streets and steam cleaning of the Colorado sidewalks,
- Conducted marketing campaign to inform shoppers of the benefits of meter revenues.

A key element of the plan was the creation of the Old Pasadena Business Improvement District (BID). Developed in partnership with the City of Pasadena, the BID reinvests parking revenues in the district. The BID Board consists of business and property owner who set spending priorities based upon the zone's parking meter revenues. The first project was the Old Pasadena Streetscape and Alleyways Project. This \$5 million project updated street furniture, trees, tree grate and historic lighting fixtures. Since then, the BID has relied upon this funding source for its own street sweeping, trash collection, graffiti removal and sidewalk cleaning program.

Example: Lloyd District Meter District

The Lloyd District Meter District (Williams, et al 2005) is located just across the Willamete River from Downtown Portland. A majority of the meter revenues are allocated to transportation improvements and programs in the Lloyd District. The Lloyd District meter district includes nearly 2,000 metered stalls serving a mixed-use business center in Portland, OR. Established in 1997, revenues from the meters can be used to fund transportation improvements and programs such as:

- Extension of the Fareless Square for transit service connecting the Lloyd District and Downtown Portland;
- Operating funds for the Lloyd District Transportation Management Association; Pedestrian improvements including sidewalks, intersection crossings and lighting.
- Signage and wayfinding systems.

Downtown Tempe Community (DTC)

DTC is a non-profit business association in Tempe Arizona that is funded through a business improvement district. The DTC manages on-street parking in Tempe's central business district. DTC now manages over 95 percent of the public and private parking, including on-street parking in its service area.

Downtown Management Commission

In Boulder, Colorado, the Downtown Management Commission manages on and off-street parking. It collects parking revenues from garages, meters and in-lieu parking fees. These revenues are used to provide free universal transit passes, guaranteed home services, ridematching, bicycle parking and other benefits.

6. Parking Financing

Financing parking can be one of the most challenging parts of parking development. Constructing parking spaces typically costs anywhere from \$8,000 per space for a suburban surface parking lot to \$60,000 per space for an underground parking facility (construction and land cost). Pacific Place parking garage in Downtown Seattle had a per stall cost of \$61,000 (Seattle Post Intelligencer, 1998 and Washington State Department of Transportation, 1999). To determine the cost of parking, it is important to consider the facility's annual income, operating costs, amortization rate, land costs and construction costs. The cost of parking also needs to consider the highest and best use of land. For infill locations, the opportunity cost can be very high and therefore need to be considered with the above mentioned factors.

The development of parking can be a risky and expensive proposition. Parking costs per space vary depending on a variety of conditions. The financial viability of parking (revenue and cost) involves a financial feasible assessment and a financing plan. Key issues include identification of revenue streams, development of financing options, determining construction costs, paying for operation and maintenance as well as examining alternative uses of land.

Generally a financial feasibility study is conducted to determine the costs of constructing and maintaining the parking facility. The following are some financing and revenue options to build a parking facility.

Most parking structures are financed with private funds. Private financing can be 10 to 20 years and may include a variety of financing options such as variable, indexed or blend mortgages. Local jurisdictions may use public financing that can involve the use of municipal bonds. Parking revenues, lease payments, benefit assessments may be used to secure bond payments. The following are other sources of funds that can be used to pay for parking facilities.

Fee-In-Lieu

In some cities, developers are allowed to buy out of minimum parking requirements. The fee-in-lieu fee is set at a level below the cost of constructing parking spaces and can be used to fund future parking facilities. More creative cities also use this fund to pay for other

transportation improvements in the project area. It can often be a favorable solution for the redevelopment of older and historic properties and can be used to develop shared parking facilities.

Risk Fund

Development of a risk fund can guarantee revenue for short-term parking lot owners/operators. This is accomplished by guaranteeing owners of parking facilities a level of revenue in exchange for agreeing to provide short term parking. This can be used to encourage the use of parking resources for short term uses, discourage commuter parking and support the use of transit alternatives.

Parking Occupancy Tax

Parking can be financed from levying a Parking Occupancy Tax (POT). The POT is a tax on paid parking. These revenues can then be designated to fund the parking program's monitoring and enforcement functions or some other agreed upon purpose.

Tax Exemptions and Variable Rate Tax

Some cities are looking at the feasibility of providing special discounts on taxes to parking owner/operators who allow access to their parking for specific priority users (such as short-term customers). They are also looking at the feasibility of a variable rate parking tax based on parking type and fee level to encourage operators to prioritize parking for this specific target market.

Parking Tax By Space

An additional form of revenue to finance parking can come from parking that is provided free or bundled into lease agreements. Such that a small annual tax on these free parking spaces could result in a significant new revenue source for transportation projects.

Grants

There are various grants available that can fund planning or construction of parking facilities. MTC has a Station Area Planning Grant Program that funds local planning for housing-supportive zoning, amenities for walking, biking and transit supportive parking policies (Simpson, Bickel, Heminger and Schaufele, 2006).

Parking Financing – Examples

Fee-In-Lieu

Example: City of Pasadena

Pasadena has used fee-in-lieu funds to pay for various transportation improvements in Old Town Pasadena. The city created a “Parking Credit Program” that enables businesses to meet their off-street parking requirements. In 2001, it was set at \$115 per space which is substantially lower than the cost to construct a parking stall. These lower charges allow a business to locate in a building which may not have the same use. This eliminates an impediment for the business moving into the building which may not have sufficient parking to meet its higher parking requirements. The intent of the City’s zoning credit is to use fees to create a pool funds to develop off-street parking (Shoup, 2005).

City of Mountain View

The City of Mountain View has an in-lieu fee program that is used on developments fronting the main streets in Downtown Mountain View. This encourages shared parking facilities, reduces the development cost of parking and makes better use of parking resources. The in-lieu fees can work with density adjustments for residential uses (Hurrell, 2006).

Risk Fund

Example: Seattle, Washington

Seattle WA (2006) is using this strategy to increase short term parking supply and discourage commuter parking as part of the Alaska Way Viaduct and Seawall Replacement Mitigation Program.

Parking Occupancy Tax

Example: Los Angeles, California

The LA Department of Transportation is contemplating establishing a Parking Occupancy Tax that would be excised on paid parking. The revenues collected from this tax would go directly to the City’s General Fund. This initiative would increase revenues available to cover increased monitoring, enforcement, and regulation of off-street parking operations.

Parking Tax By Space

Example: Los Angeles, California

The City of Los Angeles is considering placing a small annual tax placed on free parking or parking that is otherwise bundled into lease agreements could result in a significant new revenue source for parking or transportation projects.

Grants

Example: City of Claremont, California

The City of Claremont secured funding for a 477 space parking facility that includes preferential parking for transit users and carpoolers. The city used a combination of local and FTA funds. This suburban community is developing a transit-oriented village consisting of 35 acres with over 200 new high-rise residential units with reduced parking requirements and over 150,000 square feet of retail, commercial and office space. The parking structure will be used to consolidate parking, reduce surface parking, support transit-oriented development and the Claremont Intermodal Regional Transportation Center. Parking is prioritized for transit users and retail customers (Kodama, 2005).